

WHAT IS CLAIMED IS:

1. A method of producing a metal nanocomposite powder in which carbon nanotubes are dispersed in a matrix, the method comprising:

- (a) dispersing carbon nanotubes in a predetermined dispersing solvent to form a dispersed solution;
- (b) primarily treating the dispersed solution using ultrasonic waves;
- (c) uniformly mixing water-soluble metal salts or metal hydrates with the treated dispersed solution of (b);
- (d) secondarily treating the dispersed solution of (c) using ultrasonic waves;
- (e) drying and calcining the dispersed solution of (d) to produce a metal oxide nanocomposite powder; and
- (f) reducing the metal oxide nanocomposite powder of (e).

2. The method of claim 1, wherein the dispersing solvent of (a) is selected from the group consisting of water, ethanol, nitric acid solution, toluene, N,N-dimethylformamide, dichlorocarbene, and thionyl chloride.

3. The method of claim 1, wherein the water-soluble metal salts or metal hydrates of (c) comprise a metal selected from the group consisting of copper, nickel, cobalt, iron, and tungsten.

4. The method of claim 1, wherein the drying of (e) is conducted at about 80°C to about 100°C.

5. The method of claim 1, wherein the calcining of (e) is conducted at about 200°C to about 350°C under atmospheric air when the matrix requires a calcination temperature of about 400°C or lower.

6. The method of claim 1, wherein the calcining of (e) is conducted at about 400°C to about 1700°C under reduced pressure when the matrix requires a calcination temperature of about 400°C or higher.

7. The method of claim 6, further comprising a drying step at about 300°C to about 350°C.

8. The method of claim 1, wherein the reducing of (f) is conducted under a reducing gas atmosphere.

9. The method of claim 1, wherein the reducing of (f) is conducted under a hydrogen, CO, or CO<sub>2</sub> gas atmosphere.

10. A metal nanocomposite powder, comprising a carbon nanotube dispersed in a matrix, produced by the method of claim 1.